

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for operating a vehicle having a first electrical bus for providing power to accessory loads and a second electrical bus electrically coupled to the first electrical bus, the second electrical bus including an ultracapacitor and at least one electric motor/generator for providing electric motor traction assist to wheels of the vehicle, the method comprising:

providing electric motor assist by powering the electric motor/generator with energy from the ultracapacitor; and

regulating a voltage of the first electrical bus within a predefined voltage range while the electric motor provides the electric motor traction assist.

2. (Original) The method of claim 1, wherein regulating the voltage of the first electrical bus includes executing a start-up energy management mode.

3. (Original) The method of claim 1, wherein regulating the voltage of the first electrical bus includes executing an electric traction assist energy management mode.

4. (Original) The method of claim 1, wherein regulating the voltage of the first electrical bus includes executing a running energy management mode.

5. (Original) The method of claim 1, wherein regulating the first electrical bus within the predefined voltage range includes controlling a DC/DC converter electrically coupled between the first and second electrical buses to prevent electric energy to flow from the second to the first bus during the electric motor traction assist.

6. (Original) The method of claim 5, further comprising providing energy from the first to the second electrical bus if an ultracapacitor voltage of the ultracapacitor is

below a predefined voltage limit by controlling the DC/DC converter such that electric energy flows from the first to the second electric bus while still regulating the first electric bus within the predefined voltage range, the electric motor traction assist provided based on the electric energy flow from the first to the second electric bus.

7. (Original) The method of claim 6, further comprising permitting energy to flow from a battery electrically coupled to the first electrical bus to the second electrical bus to permit the electric energy to flow from the first to the second electric bus.

8. (Original) The method of claim 7, further comprising controlling an alternator set-point to increase energy flow to the first electrical bus from an alternator electrically coupled to the first electrical bus based on the energy flow from the battery to the second electric bus if the battery voltage of the battery is below a predefined battery voltage range.

9. (Original) The method of claim 6, further comprising regeneratively braking the electric motor/generator for charging the ultracapacitor and for providing energy to the first electrical bus by regulating the flow of energy from the second to the first electrical bus while still regulating the first electric bus within the predefined voltage range by controlling energy flow through the DC/DC converter.

10. (Original) The method of claim 9, further comprising lowering an alternator set-point based on the energy flow produced by the regenerative braking to limit energy provided by the alternator to the first electrical bus for regulating the first electric bus within the predefined voltage range.

11-20. (Cancel)

21. (New) A method for operating a vehicle having a first electrical bus for providing power to accessory loads and a second electrical bus electrically coupled to the first

electrical bus, the second electrical bus including an ultracapacitor and at least one electric motor/generator for providing electric motor traction assist to wheels of the vehicle, the method comprising:

providing electric motor assist by powering the electric motor/generator with energy from the ultracapacitor;

regulating a voltage of the first electrical bus within a predefined voltage range while the electric motor provides the electric motor traction assist;

wherein regulating the first electrical bus within the predefined voltage range includes controlling a DC/DC converter electrically coupled between the first and second electrical buses to prevent electric energy to flow from the second to the first bus during the electric motor traction assist; and

providing energy from the first to the second electrical bus if an ultracapacitor voltage of the ultracapacitor is below a predefined voltage limit by controlling the DC/DC converter such that electric energy flows from the first to the second electric bus while still regulating the first electric bus within the predefined voltage range, the electric motor traction assist provided based on the electric energy flow from the first to the second electric bus.

22. (New) The method of claim 21, further comprising permitting energy to flow from a battery electrically coupled to the first electrical bus to the second electrical bus to permit the electric energy to flow from the first to the second electric bus.

23. (New) The method of claim 22, further comprising controlling an alternator set-point to increase energy flow to the first electrical bus from an alternator electrically coupled to the first electrical bus based on the energy flow from the battery to the second electric bus if the battery voltage of the battery is below a predefined battery voltage range.

24. (New) The method of claim 22, further comprising regeneratively braking the electric motor/generator for charging the ultracapacitor and for providing energy to the first electrical bus by regulating the flow of energy from the second to the first electrical

bus while still regulating the first electric bus within the predefined voltage range by controlling energy flow through the DC/DC converter.

25. (New) The method of claim 24, further comprising lowering an alternator set-point based on the energy flow produced by the regenerative braking to limit energy provided by the alternator to the first electrical bus for regulating the first electric bus within the predefined voltage range.

26. (New) A method for operating a vehicle having a first electrical bus for providing power to accessory loads and a second electrical bus electrically coupled to the first electrical bus, the second electrical bus including an ultracapacitor and at least one electric motor/generator for providing electric motor traction assist to wheels of the vehicle, the method comprising:

providing electric motor assist with energy transferred over the second electrical bus to the electric motor/generator; and

regulating a voltage of the first electrical bus within a predefined voltage range during the electric motor assist.